



Massachusetts
Department
of
ENVIRONMENTAL
PROTECTION

fact sheet

Innovative and Alternative (I/A) On-Site Septic Systems

For most Massachusetts homes without access to municipal sewers, septic systems provide for on-site wastewater treatment and disposal. However, site limitations can make it difficult to replace a failing cesspool or septic system with a conventional septic system that will meet state standards. Innovative/Alternative (I/A) on-site systems can help address these situations:

- They are generally better than conventional septic systems at removing solids and other pollutants from wastewater before it goes to the soil absorption system (SAS).
- The SAS following an I/A technology can be expected to have a longer life.
- I/A technology can also provide advanced treatment to reduce the wastewater's nitrogen content. For this reason, nitrogen reducing systems may be required for new home construction near a private or public water supply well or other nitrogen-sensitive areas.

Whether your home already has an I/A system or you are thinking about installing one, it's important to get acquainted with the basics: what your alternatives are, how they work, what they cost to install and maintain, what is required to stay in compliance with Title 5 (the State Environmental Code), and who you can turn to for additional information and assistance.

I/A Systems: the Basics

Before any I/A technology can be used in Massachusetts, it must be reviewed and approved by the Department of Environmental Protection (DEP). Before it can be installed at a particular site in a given community, the local board of health needs to review and approve plans prepared by a qualified designer who is either a registered professional engineer or a registered sanitarian. In certain instances, the site-specific local approval must then be sent to DEP for concurrence and final authorization.

Both local and state environmental officials involved in the approval process are responsible for ensuring that the proposed system meets local requirements, which may be more stringent than DEP's; that the selected I/A technology will perform at least as well as, if not better than, a conventional septic system; and that the installation is done in accordance with all the requirements of Title 5.

As of June 2001, DEP had approved nearly 50 different I/A on-site technologies for use in Massachusetts, and DEP and local boards of health had approved more than 1,350 individual installations across the state. DEP's website has detailed information on approved technologies (see last page of this brochure for web addresses).

Have an I/A on-site system already?

You need to know what kind of technology it employs, keep good records on the system's location, and be sure to operate and maintain it properly. DEP requires that owners of I/A systems have a maintenance contract with a specifically licensed individual or company.

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This information is available in
alternate format by calling our
ADA Coordinator at
(617) 574-6872.

Want to investigate I/A on-site technologies?

Your first stop should be the office of your local board of health. There, you will learn about local requirements for on-site systems, possible restrictions on the use of I/A on-site technologies, background information about environmental conditions in your community, and information on qualified on-site wastewater system design professionals.

No matter what type of system you want to install for on-site wastewater treatment and disposal, you will need to work with a qualified system designer to make the right decisions and to produce plans that can be submitted to obtain local and, if necessary, DEP approval. Here are some initial questions to ask the designer:

- Should I install an I/A system?
- What are my technology options?
- What are the local and state approval requirements?
- How much will it cost me to install, operate and maintain an I/A technology as opposed to a conventional septic system?

Once you have identified one or more specific technologies to consider, you should ask additional questions of the designer.

- How many of these systems are operating in Massachusetts? What does the performance data show? What is the warranty?
- What type of DEP approval does this system have? Will DEP approval be required to install the system on my lot?
- What are the sampling and testing requirements? What will the operation and maintenance service contract cover?
- Is there any information available on equipment or operating problems?

Buying a home?

If you are thinking of purchasing a previously-owned home that is not connected to a sewer, you should request a copy of the inspection report that is required by Title 5 when a house is to be sold. This is a requirement whether the house has a conventional septic system or an I/A system.

For either new or existing homes, you should inquire about the on-site system and whether it employs I/A technology. If it does, you should ask the owner or real estate agent the same questions that you would ask a designer. If they can't answer your questions, you should require that they either do the necessary research and get back to you or put you in contact with the designer of the system. Don't sign a purchase-and-sale agreement until you are fully informed about the type of I/A system in use on the property, as well as the related maintenance contract requirements, annual operating and energy costs, and maintenance history.

Want to learn more?

For additional information about I/A on-site technologies for wastewater treatment and disposal, call DEP's Title 5 Hotline at (800) 266-1122 or contact the DEP Regional Service Center that covers your part of the state (the local board of health can tell you which DEP regional office serves your community):

Western

(Springfield) (413) 775-2214

Central

(Worcester) (508) 792-7683

Metro/Northeast

(Wilmington) (978) 661-7677

Southeast

(Lakeville) (508) 946-2714

On the Web:

Massachusetts Department of Environmental Protection:

Basic consumer information on septic system maintenance, inspection, repair and financing: <http://www.state.ma.us/dep/consumer/consumer.htm>

Frequently asked questions about the agency's I/A on-site technology approval program: <http://www.state.ma.us/dep/brp/www/t5pubs.htm>

Technical information on I/A technologies approved for use in Massachusetts: <http://www.state.ma.us/dep/brp/www/t5pubs.htm>

Massachusetts Alternative Septic System Test Center:

<http://www.buzzardsbay.org/etimain.htm>

Small Flows Clearinghouse:

http://www.nesc.wvu.edu/nsfc/nsfc_index.htm

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